UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF COMMERCIAL FISHERIES

CALIFORNIA FISHERY MARKET NEWS MONTHLY SUMMARY

January 1964

Part II–Fishing Information*

Sea-surface temperatures, fishing and research information of interest to the West Coast tuna-fishing industry and marine scientists

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SEA SURFACE TEMPERATURE CHARTS, EASTERN PACIFIC OCEAN
JANUARY 1964

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U.S. Weather Bureau Port Meteorological Office, Cristobal, Canal Zone
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Lifeguard Headquarters, Newport Beach, California
Pacific Oceanographic Group, Nanaimo, British Columbia, by H. J. Hollister from observations by R. W. Collins at Quatsino Lightstation; J. L. Fraser at Cape St. James Light; B. Stuart at Amphitrite Point Light; R. A. Smith at Langara Island Light
Scripps Institution of Oceanography, La Jolla, California by Margaret Robinson and Hans Klein

Charts

Figure 1.--Mean sea surface temperatures (°F) derived from approximately 8000 observations. Squares show temperatures at weather-ship stations. Numerals on shore are temperatures at coastal and light-ship stations.

Figure 2.--Deviation of sea surface temperatures (°F) from long term charts of H.O. 225. Hatched areas are colder than mean.

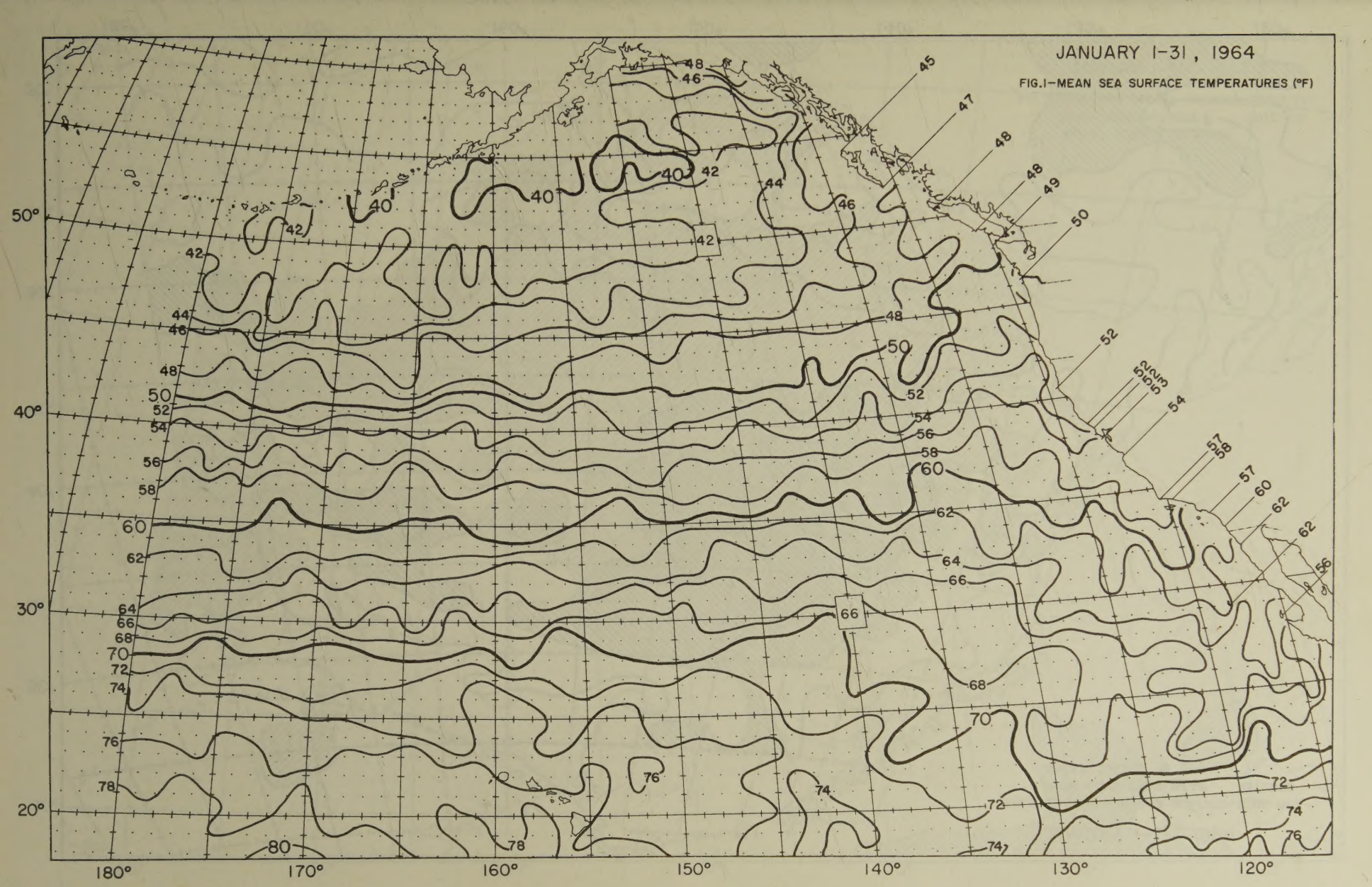
Figure 3.--Deviation of sea surface temperatures (°F) from those of January 1963. Hatched areas are colder than 1963.

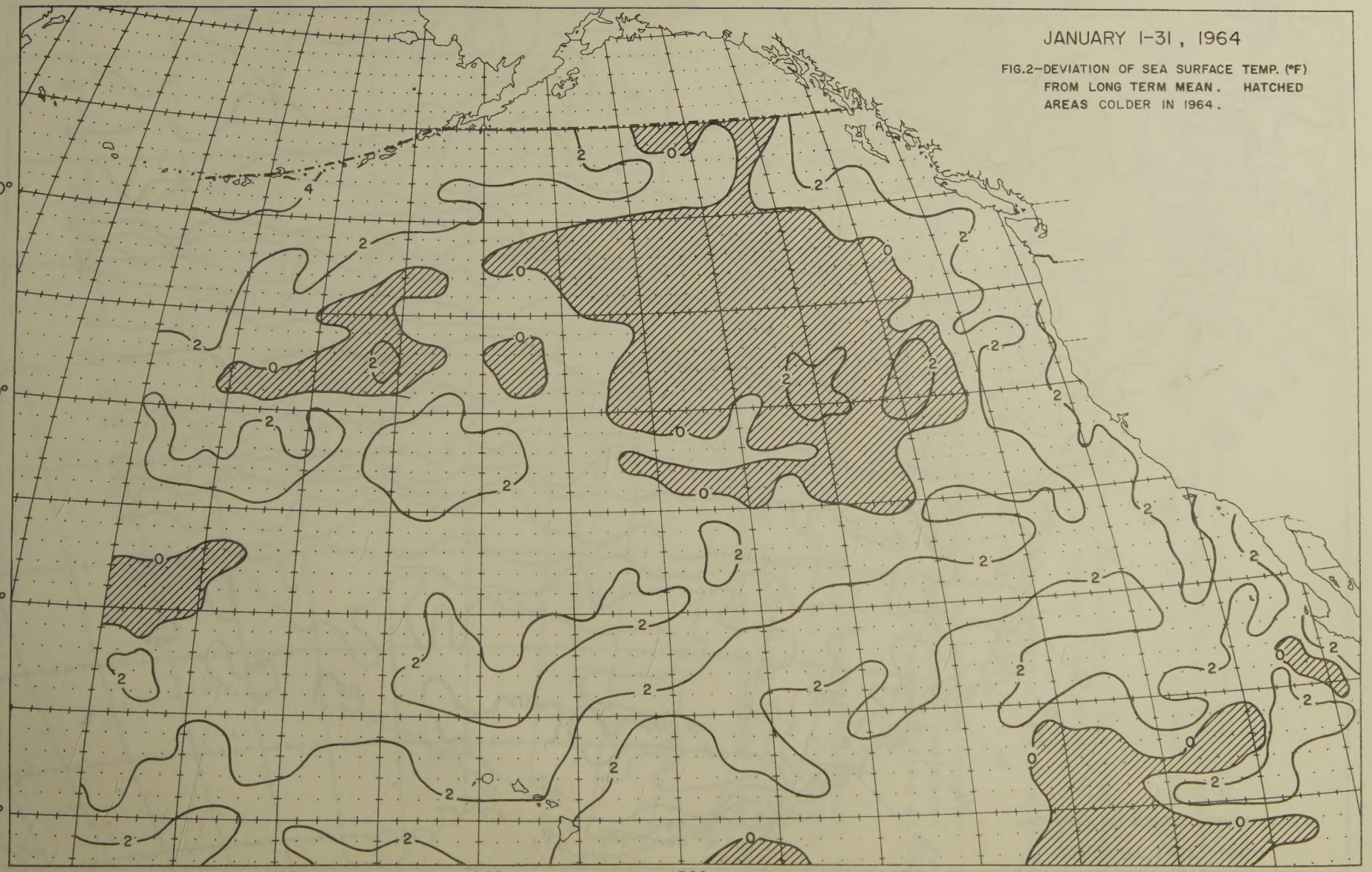
Figure 4.--Sea surface temperatures (°F) by 1-degree squares, approximately 2000 observations. Line under temperatures indicates average of two or more observations. Numerals on shore are temperatures at coastal stations.

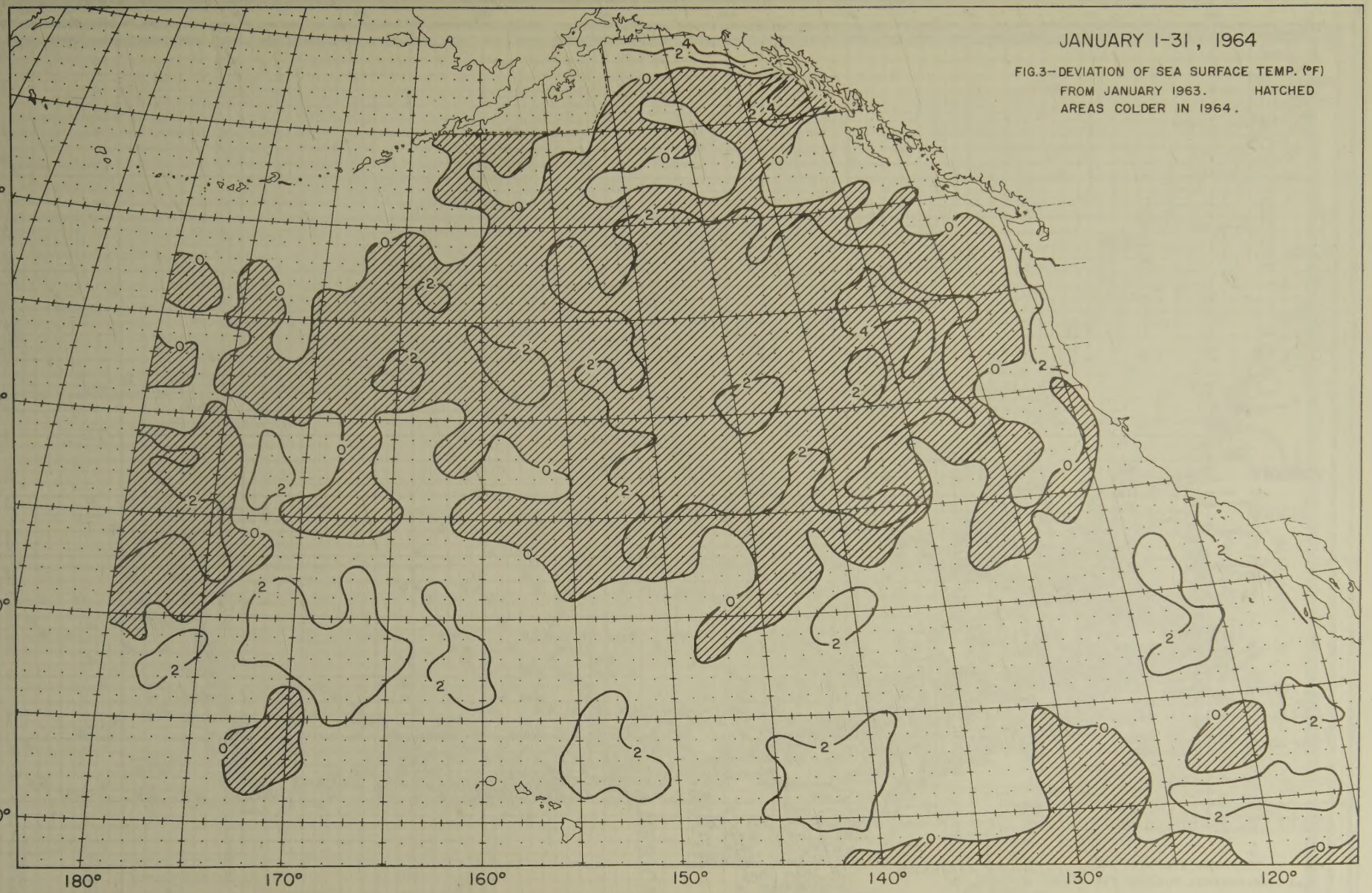
Figure 5.--Deviation of sea surface temperatures (°F) January 1964-January 1963 by 1-degree squares. Shaded areas are colder than 1963.

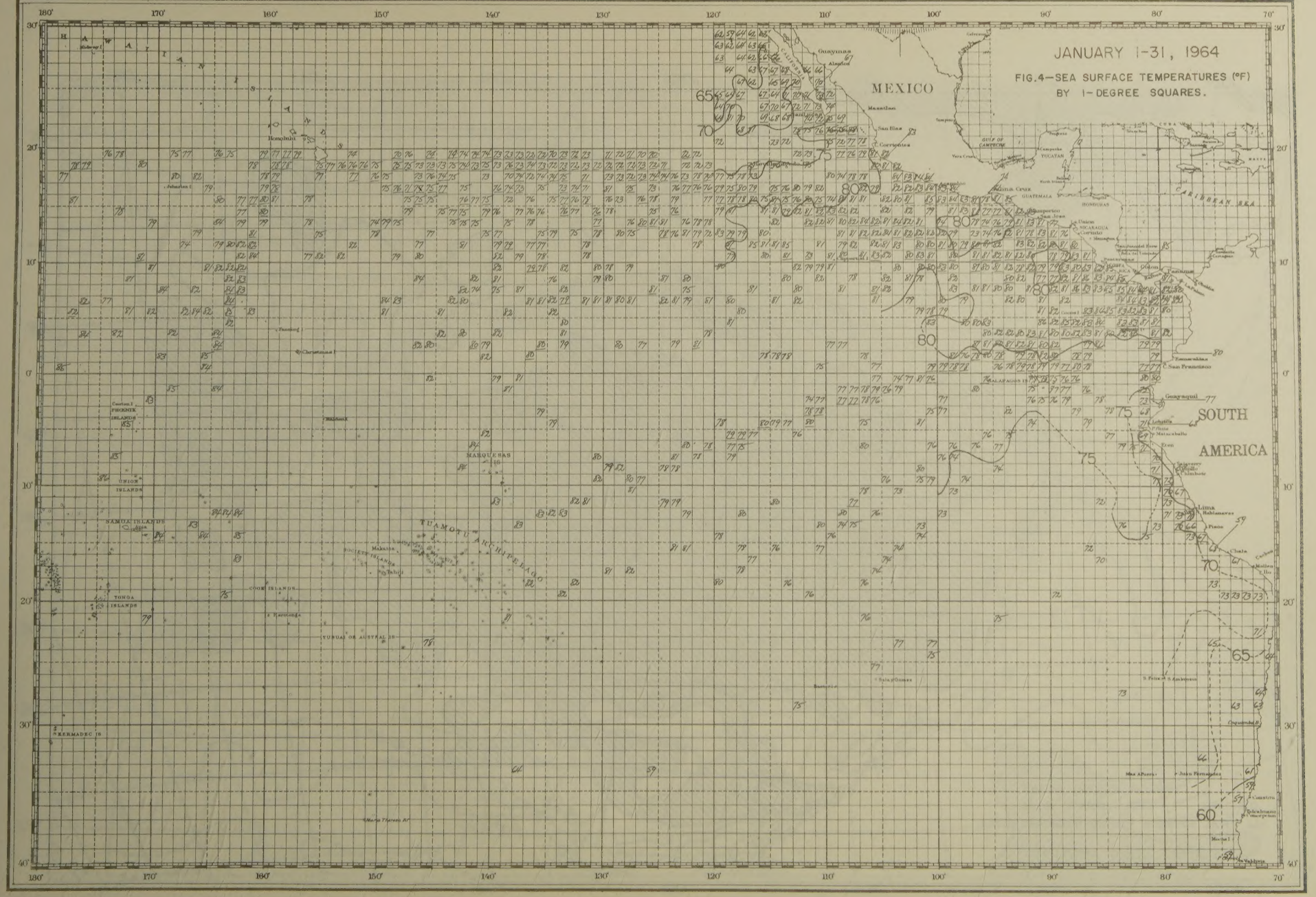
Figure 6.--Deviation of sea surface temperatures (°F) from 12-year mean (1947-1958) by 2-degree squares. Shaded areas are colder than 1963.

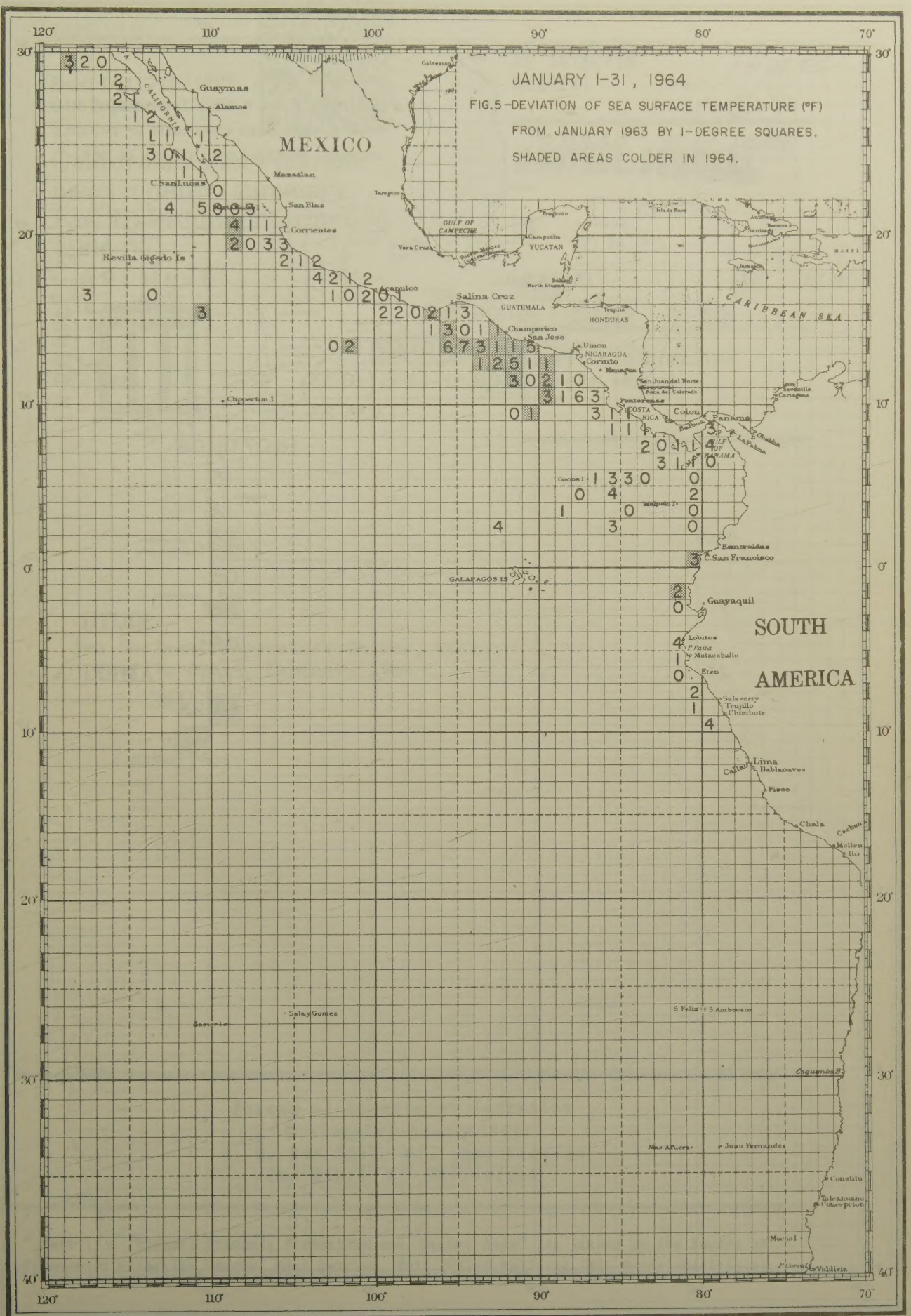
James A. Renner
Fishery Biologist (General)

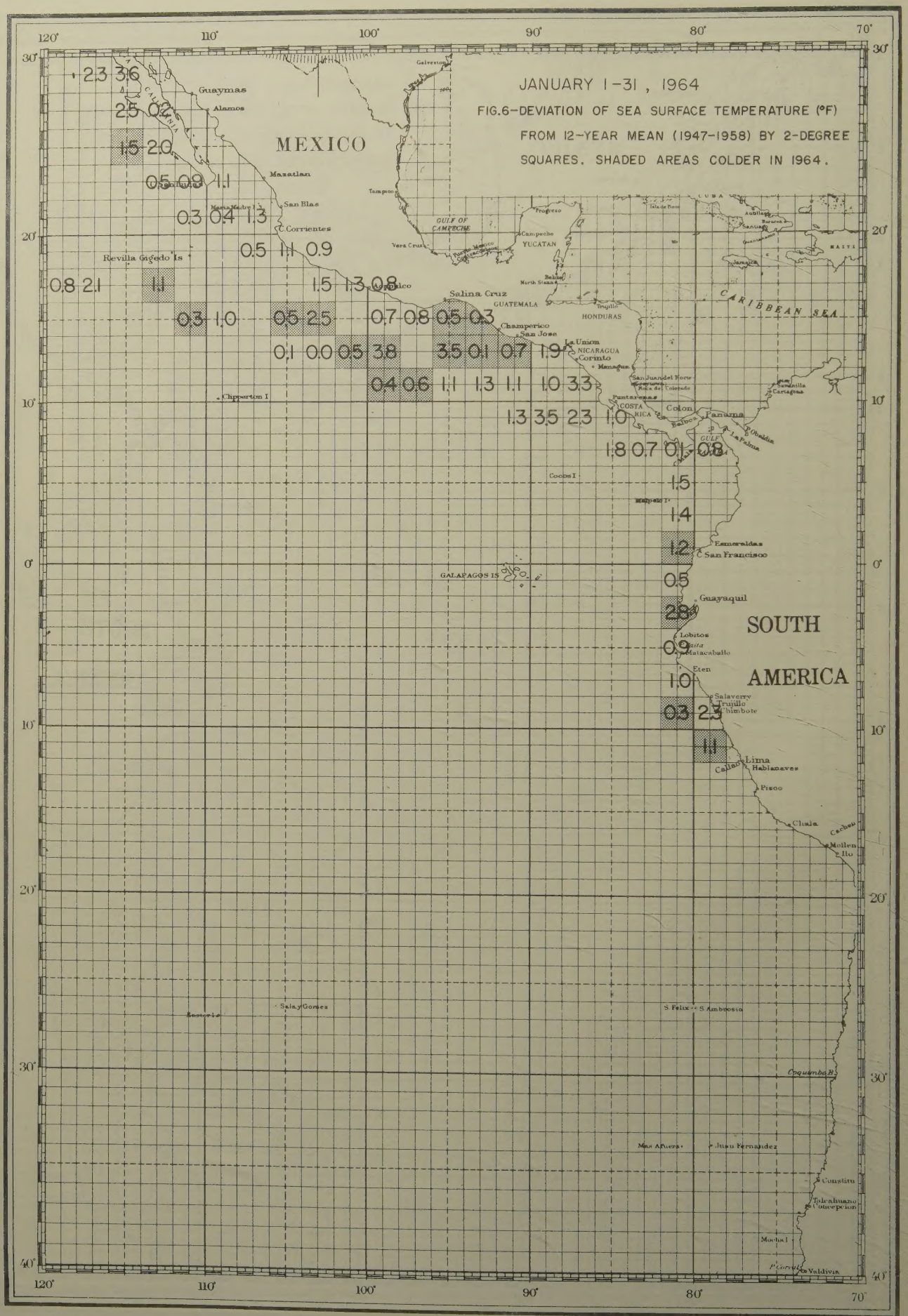

JANUARY 1-31, 1964
FIG.1-MEAN SEA SURFACE TEMPERATURES (°F)
50°
40°
30°
20°
180°
170°
160°
150°
140°
130°
120°


JANUARY 1-31, 1964
FIG.2-DEVIATION OF SEA SURFACE TEMP. (°F) FROM LONG TERM MEAN. HATCHED AREAS COLDER IN 1964.
50°
40°
30°
20°
180°
170°
160°
150°
140°
130°
120°


JANUARY 1-31, 1964
FIG.3–DEVIATION OF SEA SURFACE TEMP. (°F) FROM JANUARY 1963. HATCHED AREAS COLDER IN 1964.
50°
40°
30°
20°
180°
170°
160°
150°
140°
130°
120°


JANUARY 1-31, 1964
FIG.4—SEA SURFACE TEMPERATURES (°F)
BY 1-DEGREE SQUARES.
MEXICO
SOUTH
AMERICA
CARIBBEAN SEA
HAWAIIAN
ISLANDS
Honolulu
PHOENIX
ISLANDS
MARQUESAS
ISLANDS
SAMOA ISLANDS
TUAMOTU ARCHIPELAGO
SOCIETY ISLANDS
COOK ISLANDS
TONGA
ISLANDS
KERMADEC IS.
Guayaquil
Lima
Callao
Chala
Pisco
Matarani
Arica
Iquique
Antofagasta
Valparaiso
Juan Fernandez
Mas A Fuera
Easter I.
Tahiti
Papeete
Malden I.
Christmas I.
Canton I.
Fanning I.
Palmyra I.
Johnston I.
Wake I.
Baker I.
Howland I.
Jarvis I.
GALAPAGOS IS.
Manzanillo
Acapulco
Salina Cruz
Puerto Madero
San Jose
Corinto
Balboa
Cristobal
Colon
Buenaventura
Tumaco
Esmeraldas
San Francisco
Callao
Mollendo
Arequipa


JANUARY 1-31, 1964
FIG.5-DEVIATION OF SEA SURFACE TEMPERATURE (°F)
FROM JANUARY 1963 BY 1-DEGREE SQUARES.
SHADED AREAS COLDER IN 1964.
MEXICO
SOUTH
AMERICA
CARIBBEAN SEA
GULF OF CAMPECHE
GULF OF PANAMA
GALAPAGOS IS
CALIFORNIA
Guaymas
Alamos
Mazatlan
C. San Lucas
San Blas
Corrientes
Revilla Gigedo Is
Acapulco
Salina Cruz
GUATEMALA
HONDURAS
Champerico
San Jose
La Union
NICARAGUA
Cornito
Managua
Chippertom I
COSTA RICA
Colon
Panama
Esmeraldas
C. San Francisco
Guayaquil
Lobitos
Pta Aguja
Matacaballo
Eten
Salaverry
Trujillo
Chimbote
Lima
Callao
Huacho
Pisco
Chala
Mollendo
Ilo
Salas y Gomez
S. Felix
S. Ambrosio
Juan Fernandez
Mas Afuera
Constitu
Talcahuano
Concepcion
Valdivia
Mocha I.
Coquimbo
Galveston
Tampico
Vera Cruz
Progreso
Campeche
YUCATAN
Belize
Trujillo
Cuba
Haiti
Jamaica
Aruba
Curacao
Barbados
Grenada
Trinidad
Tobago
Margarita
Maracaibo
Puerto Cabello
La Guaira
Barranquilla
Cartagena
Rio Hacha
Puerto Limon
Bocas del Toro
San Juan del Norte
Corinto
Balboa
Taboga
Chame Pt
Taboguilla
Perlas
Coiba I
Cocos I
Malpelo I
Gorgona I
Gallo I
Pta Parina
Pta Pariñas
Pta Aguja
Pta Pariñas
Pta Coloso
Pta Lobos
Pta Chanco
Pta Lavapie
Pta Galera
Pta Tumbes
Pta Pariñas
Pta Aguja
Pta Pariñas
Pta Coloso
Pta Lobos
Pta Chanco
Pta Lavapie
Pta Galera
Pta Tumbes


JANUARY 1-31, 1964
FIG.6-DEVIATION OF SEA SURFACE TEMPERATURE (°F)
FROM 12-YEAR MEAN (1947-1958) BY 2-DEGREE
SQUARES. SHADED AREAS COLDER IN 1964.
MEXICO
SOUTH
AMERICA
CARIBBEAN SEA
GULF OF CAMPECHE
YUCATAN
GUATEMALA
HONDURAS
NICARAGUA
COSTA RICA
GALAPAGOS IS
Guaymas
Alamos
Mazatlan
San Blas
Corrientes
Revilla Gigedo Is
Salina Cruz
Champerico
San Jose
La Union
Corinto
Managua
Chipperton I
Cocos I
Malpelo I
Esmeraldas
San Francisco
Guayaquil
Lobitos
Eten
Salaverry
Trujillo
Chimbote
Lima
Callao
Pisco
Chala
Mollendo
Ilo
Sala y Gomez
S. Felix
S. Ambrosio
Juan Fernandez
Constitucion
Talcahuano
Concepcion
Valdivia
Panama
Colon
Balboa
Puerto Limon
Cartagena
Tampico
Vera Cruz
Progreso
Campeche
Belize
Trujillo
Galveston
CUBA
HAITI
JAMAICA